

What is claimed is:

1. A spreader roll for processing machines of the type used in the paper, textile and plastics industry comprising:

a bowable shaft;

a cylindrical outer surface comprising a plurality of cylinder elements axially aligned along said shaft, each of said elements having an outer surface and at least one end portion having a nonlinear profile.

2. The spreader roll of claim 1 wherein said nonlinear profile of adjacent ones of said cylinder elements are arranged in mating relationship.

3. The spreader roll of claim 2 wherein said nonlinear profile defines a generally sine wave configuration.

4. The spreader roll of claim 3 wherein said sine wave configuration includes flattened areas.

5. The spreader roll of claim 3, wherein said sine wave configuration includes tessellated, partially mosaic flattened areas.

6. In a spreader roll including a bowable shaft, a cylindrical outer surface mounted for rotation about said shaft, said cylindrical outer surface being comprised of a plurality of interconnected cylinder elements, each of said cylinder elements including an outer surface and oppositely disposed end portions, the improvement wherein at least one of said oppositely disposed end portions has a nonlinear profile.

7. The spreader roll of claim 6 wherein said nonlinear profile defines a sine wave configuration.

8. The spreader roll of claim 7 wherein said sine wave configuration includes flattened areas.

9. The spreader roll of claim 8 wherein said sine wave configuration includes tessellated, partially mosaic flattened areas.

Sch 17

5

5

003721 220460

10 A spreader roll for processing machines of the  
5 type used in the paper, textile and plastics industry  
comprising:

a bowable shaft;

a plurality of roll segments, said roll segments  
being rotatably supported on said shaft; and

10 each said segment having at least one non-linear  
end edge profile.

11. The spreader roll of claim 10 wherein said non-  
linear end edge profiles are arranged to intermesh with  
adjacent roll segments.

12. The spreader roll of claim 10 wherein said non-  
linear end edge profile is substantially sinusoidal.

13. The spreader roll of claim 12 wherein the  
substantially sinusoidal edge profile includes at least  
one flattened area.

14. The spreader roll of claim 12 wherein the  
substantially sinusoidal edge profile includes  
tessellated, partially mosaic flattened areas.

15. A spreader roll for processing machines of the  
type used in the paper, textile and plastics industry  
comprising:

a bowable shaft,

5 a cylindrical outer surface comprising a  
plurality of cylindrical roll segments axially aligned  
and rotatably supported on said shaft; and  
each said segment having a sinusoidal end edge profile.

16. The spreader roll of claim 15 wherein said non-  
linear end edge profiles are arranged to interlock with  
adjacent roll segments.

17. The spreader roll of claim 15 wherein each said  
sinusoidal end edge profile includes at least one  
flattened area.

5 18. The spreader roll of claim 15 wherein each said  
sinusoidal end edge profile includes tessellated,

09740262 121300

partially mosaic flattened areas.

09740263 121800